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EXAMINER	
FEENEY, BRETT A	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/826,790	MCWHITE, JAMES DAVID	
	Examiner	Art Unit	
	BRETT FEENEY	4114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/30/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Status of the Claims

1. The following is a Non-Final Office Action.

2. The following is in response to application 10/826790 filed on 04/16/2004.

3. Claims 1 – 20 are currently pending and have been examined.

Rejections under § U.S.C. 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 16 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 16 recite "means for enabling access" and "means for enabling determination", however, no programming steps, code, computer models, process diagrams/flowchart, decision trees or the like provided of the system, (or a human being practicing this invention), would practice or use this program.

6. Claims 16 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 16 recite "computer program logic", however, no programming steps, code, computer models, process diagrams/flowchart, decision trees or the like provided of the system, (or a human being practicing this invention), would practice or use this program.

7. Claims 1 – 20 are rejected under 35 U.S.C. 112, first paragraph, because the specification does not reasonably provide an adequate scope of enablement for the limitations describing steps "relating", "finding", "obtaining" and "evaluating". The aforementioned steps include any and all means for calculating, modeling, or solving an objective function without reciting any specific algorithm or program to perform these steps. The claims do not define the steps, algorithms used, code, instructions, or the like that would enable one to understand the means for performing these functions. The claimed limitations do not fall under 35 USC § 112 ¶ 6 - "means for," because the scope of the claim is not defined as to the particular methods or structures enumerated in the specification. Therefore, the claim is properly construed to encompass any and all means for performing the recited functions.

8. Claims 16 – 20 are rejected under 35 U.S.C. 112, first paragraph, because the specification does not reasonably provide an adequate scope of enablement for the limitation "means for enabling access" and "means for enabling determination". The claim itself does not define the steps, algorithms used, code, instructions, or the like that would enable one to understand the means for accessing or determining. The claimed limitation does not fall under 35 USC § 112 ¶ 6 - "means for," because the scope of the claim is not defined as to the particular methods or structures enumerated in the specification. Therefore, the claim is properly construed to encompass any and all means for performing the recited functions.

When a limitation encompasses any and all structures or acts for performing a recited function, including those which were not what the applicant had invented, the disclosure fails to provide a scope of enablement commensurate with the scope of the claim. *Ex parte Miyazaki*, Appeal No. 2007-3300, p. 27 (BPAI, 2008) (referencing *Halliburton Oil Well Cementing Co. v. Walker*, 329 US 1 (1946)). Here, the limitation describes merging profiles, but nowhere defines any of the structure involved in reaching that result. As such, it is properly construed to encompass any and all means for modeling profiles, not just the particular means recited in the specification. Because the limitation does not enable every structure and act that reasonably falls

within its scope, the disclosure fails to provide an adequate scope of enablement as required by 35 USC 112, first paragraph.

To overcome this rejection, applicant must amend the limitation to adequately claim only the structure or acts enabled by the specification.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1 – 5 and 7 – 20 and are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1 recites "stowage aid type". It is not clear what the applicant intends by using the phrase "stowage aid type", nor is there any special definition provided in the specification for what applicant means by "stowage aid type". The examiner has interpreted "a stowage aid type" to mean a container, rack or space that is capable of stowage.
- Claims 2 & 3 recite "maximal extent of said storeroom area that is accommodative". The terms "maximal extent" and "accommodative" are relative terms which renders the claims indefinite. The terms "maximal" and "accommodative" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner has interpreted "maximal extent" to refer to a number. The examiner has interpreted "accommodative" to refer to an area of space that is greater than the object or objects being stored in the space.
- Claims 4 & 5 are rejected for the same reasons as referenced above.
- Claim 7 recites "type of stowage aid". This claim is rejected for the same reasons as claim 1.
- Claim 8 recites "practically available for stowage". The term "practically available" is a relative term which renders the claims indefinite. The term "practically available" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one

of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner has interpreted “practically available” to refer to the total area.

- Claim 9 recites “total amount of said stowage aids” in line 2 of the claim. Stowage aids lack antecedent basis in the claim. "Said" should be removed such that the claim reads “total amount of stowage aids”.
- Claim 9 recites “a total floor area for accommodating". The term "total floor area for accommodating" is a relative term which renders the claims indefinite. The term "total floor area for accommodating” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner has interpreted “total floor area for accommodating” to refer to the total area of the floor.
- Claim 10 recites “said capabilities” in line 6 of the claim. Capabilities lack antecedent basis in the claim. "Said" should be removed such that the claim reads “different capabilities”.
- The claims are replete with terminology referring to a “type of stowage aids” or “a stowage aid type”. “Type” is an indefinite term. The examiner has interpreted these claims such that a “type of stowage aids” and "a stowage aid type” is a container, rack or space that is capable of stowage..
- Claims 16 – 20 are rejected under 35 U.S.C. 112, second paragraph, because the specification does not reasonably provide an adequately define the limitations “means for enabling access” and "means for enabling determination". The specification merely recites the same language as used in the claims without elucidating what means are used for “accessing” or “determining”. Therefore, the claims fail to meet the requirements set forth in 35 USC 112, sixth paragraph.

Rejections under § U.S.C. 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1 – 14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

13. Claims 1 – 14 are directed to a method. However, the recited steps of the method are held to be non-statutory subject matter because the recited steps of the method are (1) not tied to another statutory class (such as a particular apparatus) or (2) not transforming the underlying subject matter (such as an article or materials) to a different state or thing.

Rejections under § U.S.C. 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Examiner's Note: The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

16. Claims 1 – 5 and 9 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lohmann et al., (2002/0026296 A1).

Claim 1

Lohmann shows:

- *providing a database of extents of accommodativeness by rectangular storerooms with respect to at least one stowage aid type* (see at least paragraph 0009; "…aircraft-specific geometry is stored in, and then automatically loaded and depicted from, a drawing module of the data processing system. The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner…".);
- *based on said database, relating an amount of stowage aids to a storeroom area that is accommodative of said stowage aids* (see at least paragraph 0009; "The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner according to a defined rule set that takes into account the particular customer requirements.").
- *wherein as to each said stowage aid type said database indicates variation in said extents of accommodativeness by at least two said rectangular storerooms* (see at least paragraph 0012; "…specific cabin layout for a particular customer, with its particular layout and arrangement of

components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry…".); Lohmann does not explicitly teach at least two rectangular storerooms "*having the same geometric area but different lengthwise-widthwise dimensions*"; however Lohmann does suggest that storerooms have different geometries and specifications, which includes two that have the same geometric area, but different dimensions.

It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to modify the automatic storage planning system and method taught by Lohmann such that storerooms have the same geometric area but different lengthwise-widthwise dimensions because "conventional processes are rather inefficient and complicated, because they require separate steps that involve at least partial duplication of effort, and do not make use of common or overlapping information and requirements among the separate steps or processes. It also becomes difficult, time consuming and expensive to carry out design revisions as a result of customer requests, or to adapt a design proposal to manufacturing requirements or limitations" (Lohmann, paragraph 0007). By utilizing the same process/method for efficaciously allocating space for stowage, businesses save time and money.

Claim 2

Lohmann teaches the limitations above. Furthermore, Lowmann shows:

- *wherein said relating includes selecting a storeroom area and finding the maximal extent of said selected storeroom area that is accommodative of said stowage aids* (see at least paragraph 0009; "The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific

geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner according to a defined rule set that takes into account the particular customer requirements." The "optimal" configuration taught by Lohmann includes using the minimal amount of space for stowage aids, maximizing the amount of stowage aids that can fit in the space, and the like. Further see at least paragraph 0012; "…particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry. Moreover, surrounding installations or components for the service channel that influence the cabin layout, are parametrically described and then added or introduced to the total or overall project. Furthermore, for a prescribed configuration of the surrounding installations and a prescribed cabin layout, the service channel will be automatically configured according to a defined rule set that takes into account the customer requirements.").

Claim 3

Lohmann teaches the limitations above. Furthermore, Lowmann shows:

- *wherein said relating includes finding a maximal amount of stowage aids usable in said maximal extent of said selected storeroom area that is accommodative of said stowage aids* (*Id.*).

Claim 4

Lohmann teaches the limitations above. Furthermore, Lowmann shows:

- *wherein said relating includes selecting a storeroom area and finding a maximal amount of stowage aids usable in said selected storeroom area* (*Id.*).

Claim 5

Lohmann teaches the limitations above. Furthermore, Lowmann shows:

- *wherein said relating includes selecting an amount of stowage aids and finding the minimal extent of storeroom area that is accommodative of said selected amount of stowage aids* (*Id.*).

Claim 9

Lohmann shows:

- *determining at least one relationship between a total amount of said stowage aids and a total floor area required for accommodating said total amount of said stowage aids* (see at least paragraph 0009; "…aircraft-specific geometry is stored in, and then automatically loaded and depicted from, a drawing module of the data processing system. The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner…".);
- *said determining including using information as to the capabilities of differently sized compartments to accommodate stowage aids* (see at least paragraph 0009; "The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner according to a defined rule set that takes into account the particular customer requirements.").
- *each said compartment being characterized by an individual floor area and individual floor dimensions, said information including indication of different said capabilities in at least two said compartments* (see at least paragraph 0012; "…specific cabin layout for a particular customer,

with its particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry…".); Lohmann does not explicitly teach at least two rectangular storerooms "*that are characterized by the same said individual floor area but different said individual floor dimensions*"; however Lohmann does suggest that storerooms have different geometries and specifications, which includes two that have the same geometric area, but different dimensions. It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to modify the automatic storage planning system and method taught by Lohmann such that storerooms have the same geometric area but different lengthwise-widthwise dimensions because "conventional processes are rather inefficient and complicated, because they require separate steps that involve at least partial duplication of effort, and do not make use of common or overlapping information and requirements among the separate steps or processes. It also becomes difficult, time consuming and expensive to carry out design revisions as a result of customer requests, or to adapt a design proposal to manufacturing requirements or limitations" (Lohmann, paragraph 0007). By utilizing the same process/method for efficaciously allocating space for stowage, businesses save time and money.

Claim 10

Lohmann teaches the limitations above. Furrthermore, Lohmann shows:

- *said total amount of said stowage aids is of said stowage aids of at least one selected type* (see at least paragraph 0012; "the specific cabin layout for a particular customer, with its particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into

the project cabin layout, and then adding or combining this information with the aircraft-specific geometry.");

- *said information pertains to each of at least one type of said stowage aids; each said compartment is characterized by a portion of said individual floor area that is unsuitable for situation thereupon of said stowage aids* (see at least paragraph 0009; "…defining the spatial arrangement of the components relative to each other, and also optimizing the functional position and/or the number or quantity of the components. The method involves the following steps. The basic aircraft type underlying the construction documents or build documents is input into a configuration tool of a data processing system. The aircraft-specific geometry is stored in, and then automatically loaded and depicted from, a drawing module of the data processing system. The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry…". The rules as taught by Lohmann are restrictions and constraints as to how compartments may be organized);
- *said different said capabilities are associated with the respective natures of the corresponding said portions* (*Id.*);
- *said unsuitability is associated with at least one of accessibility to said stowage aids in said compartment* (see at least paragraph 0012; "…inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry…". Further, see at least paragraph 0013; "…cabin component reference database with parametrically predefined components is provided for defining the cabin layout. The parametric definition of these components advantageously allows the respective definition of essentially any new components to be added to the reference database as needed or desired.").

Claim 11

Lohmann teaches the limitations above. Furthermore, Lohmann shows:

- *wherein said determining includes estimating a total amount of said stowage aids of at least one selected type that can be accommodated by a predetermined total floor area* (see at least paragraph 0009; "The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner according to a defined rule set that takes into account the particular customer requirements." The "optimal" configuration taught by Lohmann includes using the minimal amount of space for stowage aids, maximizing the amount of stowage aids that can fit in the space, and the like. Further see at least paragraph 0012; "…particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry. Moreover, surrounding installations or components for the service channel that influence the cabin layout, are parametrically described and then added or introduced to the total or overall project. Furthermore, for a prescribed configuration of the surrounding installations and a prescribed cabin layout, the service channel will be automatically configured according to a defined rule set that takes into account the customer requirements.").

Claim 12

Lohmann teaches the limitations above. Furthermore, Lohmann shows:

- said information pertains to each of at least one type of said stowage aids; each said compartment is characterized by a portion of said individual floor area that is unsuitable for situation thereupon of said stowage aids (see at least paragraph 0012; "…inputting a position

in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry…". Further, see at least paragraph 0013; "…cabin component reference database with parametrically predefined components is provided for defining the cabin layout. The parametric definition of these components advantageously allows the respective definition of essentially any new components to be added to the reference database as needed or desired.");

- said different said capabilities are associated with the respective natures of the corresponding said portions (*Id.*)
- said unsuitability is associated with at least one of: accessibility to said stowage aids in said compartment (*Id.*).

Claim 13

Lohmann teaches the limitations above. Furrthermore, Lohmann shows:

- wherein said determining includes estimating a total floor area required for accommodating a predetermined amount of said stowage aids of at least one selected type (see at least paragraph 0009; "The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system. Finally, in the configuration tool of the data processing system, the objects or components on the one hand, as well as the aircraft-specific geometry on the other hand, are automatically spatially configured relative to one another in an optimal manner according to a defined rule set that takes into account the particular customer requirements." The "optimal" configuration taught by Lohmann includes using the minimal amount of space for stowage aids, maximizing the amount of stowage aids that can fit in the space, and the like. Further see at least paragraph 0012; "…particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel,

by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry. Moreover, surrounding installations or components for the service channel that influence the cabin layout, are parametrically described and then added or introduced to the total or overall project. Furthermore, for a prescribed configuration of the surrounding installations and a prescribed cabin layout, the service channel will be automatically configured according to a defined rule set that takes into account the customer requirements.").

Claim 14

Lohmann teaches the limitations above. Furrthermore, Lohmann shows:

- *said information pertains to each of at least one type of said stowage aids; each said compartment is characterized by a portion of said individual floor area that is unsuitable for situation thereupon of said stowage aids; said different said capabilities are associated with the respective natures of the corresponding said portions;* said unsuitability is associated with at least one of: accessibility to said stowage aids in said compartment (see at least paragraph 0012; "…inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry…". Further, see at least paragraph 0013; "…cabin component reference database with parametrically predefined components is provided for defining the cabin layout. The parametric definition of these components advantageously allows the respective definition of essentially any new components to be added to the reference database as needed or desired.");

17. Claims 6, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lohmann et al., (2002/0026296 A1), further in view of **Official Notice**.

Claim 6

Lohmann teaches the limitations above. Furthermore, Lowmann shows:

- *The method of estimating according to claim 1, wherein said relating includes: obtaining a hypothetical total storeroom area required for stowage of items of interest* (see at least paragraph 0012; "…the specific cabin layout for a particular customer, with its particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry.".);
- *obtaining an actual total storeroom area required for stowage of said items, said actual total storeroom area being greater than said hypothetical total storeroom area, said obtaining an actual total floor area including associating at least one compartment utilization factor with said hypothetical total storeroom area, each said compartment utilization factor corresponding to a rectangular storeroom having a given geometric area and given lengthwise-widthwise dimensions*

Lohmann does not explicitly show calculating space utilization *per se*. However, the Examiner takes **Official Notice** that it is old and well known to calculate space utilization. It is old and well known in the art to calculate space utilization for warehouses, airplanes, trains, trucks and the like. It would have been obvious to a person of ordinary skill in the art to combine the system and method of automatic storage planning taught by Lohmann with the step of calculating space utilization taught by Official Notice because businesses want to know whether they are maximizing use of available space, understand how much space is "dead-space", know whether there are opportunities for a quick redesign to increase space utilization and the like; thereby enabling businesses to maximize profits and gain efficiencies with shipping/receiving logistics.

Claim 7

- *The method of estimating according to claim 6, wherein said obtaining a hypothetical total storeroom area includes dividing the total volume of said items by the height of a selected type of stowage aid.*

Lohmann/Official Notice teaches the limitations above. Furthermore, the Examiner takes **Official Notice** that it is old and well known that volume of an area is equal to length multiplied by width multiplied by height. It is useful to calculate an area by dividing the total volume/area of effects by a dimension of effect housing to know the footprint of the housing and effects. Further, one may gain insight into space utilization by performing this type of calculation such as calculating space utilization for warehouses, airplanes, trains, trucks and the like. It would have been obvious to a person of ordinary skill in the art to combine the system and method of automatic storage planning taught by Lohmann with the step of calculating space utilization taught by Official Notice because businesses want to know whether they are maximizing use of available space, understand how much space is "dead-space", know whether there are opportunities for a quick redesign to increase space utilization and the like; thereby enabling businesses to maximize profits and gain efficiencies with shipping/receiving logistics.

Claim 8

Lohmann teaches the limitations above. Furthermore, Lohmann shows:

- *The method of estimating according to claim 1, wherein said relating includes: obtaining an initial quantity of items of interest for stowage* (see at least paragraph 0012; "... the specific cabin layout for a particular customer, with its particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry. Moreover, surrounding installations or components for the service channel that influence the cabin layout, are parametrically described and then added or introduced to the total or overall project.");
- *obtaining an unqualified total storeroom area, said unqualified total storeroom area representing the total storeroom area that is hypothetically available for stowage of said items* (*Id.* As taught by Lohmann, the “unqualified storeroom area” is represented by the total area of the plane.);

- *obtaining a qualified total storeroom area* (see at least paragraph 0009; "The aircraft-specific geometry is stored in, and then automatically loaded and depicted from, a drawing module of the data processing system. The required geometric objects or components are determined and mathematically described, and position rules are mathematically depicted and stored, by means of a function and data analysis, and are then provided and combined with the aircraft-specific geometry in the drawing module of the data processing system." The "qualified total storeroom" as taught by Lohmann, is represented by position rules. The position rules dictate relational and available areas provided for stowage.);
- *said qualified total storeroom area representing the total storeroom area that is practically available for stowage of said items* (see at least paragraph 0012; "…particular layout and arrangement of components such as galleys, toilets, storage closets or cabinets, seats, and the like forms a basis for an automatic designing or laying-out of the installation components and the service channel, by inputting a position in the cabin (orientation input) into the project cabin layout, and then adding or combining this information with the aircraft-specific geometry. Moreover, surrounding installations or components for the service channel that influence the cabin layout, are parametrically described and then added or introduced to the total or overall project. Furthermore, for a prescribed configuration of the surrounding installations and a prescribed cabin layout, the service channel will be automatically configured according to a defined rule set that takes into account the customer requirements…");
- said obtaining a qualified total floor area including associating at least one compartment utilization factor with said unqualified total storeroom area, each said compartment utilization factor corresponding to a rectangular storeroom having a given geometric area and given lengthwise-widthwise dimensions.

Lohmann does not explicitly show calculating space utilization *per se*. However, the Examiner takes **Official Notice** that it is old and well known to calculate space utilization. It is old and well known in the art to calculate space utilization for warehouses, airplanes, trains, trucks and the like. It would have been obvious to a person of ordinary skill in the art to combine the system and method of automatic

storage planning taught by Lohmann with the step of calculating space utilization taught by Official Notice because businesses want to know whether they are maximizing use of available space, understand how much space is "dead-space", know whether there are opportunities for a quick redesign to increase space utilization and the like; thereby enabling businesses to maximize profits and gain efficiencies with shipping/receiving logistics.

- said unqualified total storeroom area being greater than said qualified total storeroom area

Lohmann does not explicitly state that the total area of the storeroom is greater than the area that will be used *per se*. However the Examiner takes **Official Notice** that it is old and well known in the art that a planned storage area would be greater or equal to the total area planned to store a set of items because it would be impossible to use more of an area than is available. It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to combine the system and method of automatic storage planning taught by Lohmann with the constraint that a planned storeroom area would be greater than or equal the total area required to store a set of objects because if one tried to plan to store more goods in a room than the capacity of the room, there would not be enough room to actually store the goods when implemented.

Claim 15 – 20

Claims 15 – 20 recite limitations already addressed by the rejections of claims 1 – 14; therefore the same rejections apply to these claims.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Brett Feeney** whose telephone number is **571.270.5434.** The Examiner can normally be reached on Monday-Friday, 7:45am-5:15pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **JAMES A. REAGAN** can be reached at **571.272.6710**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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24 February 2009

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